

JOURNAL OF

Medical Education

PUBLICATION OF THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES

**National Survey of Writers of Dean's Letters
for Residency Applications**

Lisa I. Leiden and Grant D. Miller

**Policies of U.S. Medical Schools on the Use
of the NBME Part I and Part II Examinations**

G. Dean Cleghorn

Mental Health Education in Three Primary Care Specialties

James J. Strain, Harold Alan Pincus,
Leslie Hartley Gise, and Jeffrey Houpt

**Long-Term Evaluation of Training Residents
in Clinical Teaching Skills**

Janine C. Edwards, Grace E. Kissling,
Warren C. Plauché, and Robert L. Marier

Models for Continuing Professional Education

David J. Belsheim

Index to Volume 61

Journal of Medical Education

Volume 61 • Number 12 • December 1986

National Survey of Writers of Dean's Letters for Residency Applications—Lisa I. Leiden and Grant D. Miller	943
Policies of U.S. Medical Schools on the Use of the NBME Part I and Part II Examinations—G. Dean Cleghorn	954
Mental Health Education in Three Primary Care Specialties—James J. Strain, Harold Alan Pincus, Leslie Hartley Gise, and Jeffrey Houpt	958
Long-Term Evaluation of Training Residents in Clinical Teaching Skills—Janine C. Edwards, Grace E. Kissling, Warren C. Plauché, and Robert L. Marier	967
Models for Continuing Professional Education—David J. Belsheim	971
Communications: Performance on the NBME Part II Examination and Career Choice—Tennyson Williams, Larry Sachs, and J. Jon Veloski	979
Unrecognized Responses and Feelings of Residents and Fellows During Interviews of Patients—Robert C. Smith	982
Diagnosis Formulation by Residents and Physicians at Different Levels of Experience—Lawrence J. Lutz, Dennis E. Schultz, and Elaine M. Litton	984
Computer-Assisted Instruction in Patient Management for Internal Medicine Residents—T. J. Garrett and Alfred R. Ashford	987
Editorials: Federal Policy for Biomedical and Behavioral Research	990
AAMC Longitudinal Study of 1960 Medical School Graduates: A 20-Year Effort in 28 Schools, 1956–1976	991
Bibliography	993
Index to Volume 61	999

Officers of the Association and Members of the Executive Council, 1986–87

CHAIRMAN: Edward J. Stemmler, *University of Pennsylvania*
 CHAIRMAN-ELECT: John W. Colloton, *University of Iowa Hospitals and Clinics*
 IMMEDIATE PAST CHAIRMAN: Virginia V. Weldon, *Washington University*
 PRESIDENT: Robert G. Petersdorf, *AAMC, Washington, D.C.*

COUNCIL OF DEANS

Louis J. Kettel, *University of Arizona**
 William T. Butler, *Baylor College of Medicine*
 D. Kay Clawson, *University of Kansas*
 Robert S. Daniels, *L.S.U. at New Orleans*
 William B. Deal, *University of Florida*
 Walter F. Leavell, *Meharry Medical College*
 John Naughton, *SUNY at Buffalo*
 Richard S. Ross, *Johns Hopkins University*
 Hubbard E. Williams, *UC at Davis*

COUNCIL OF ACADEMIC SOCIETIES

Frank G. Moody, *University of Texas, Houston**
 David H. Cohen, *Northwestern University*
 William F. Ganong, *UC at San Francisco*
 Douglas E. Kelly, *University of Southern California*

COUNCIL OF TEACHING HOSPITALS

Spencer Foreman, *Montefiore Medical Center**
 J. Robert Buchanan, *Massachusetts General Hospital*
 Gary Gambuti, *St. Luke's-Roosevelt Hospital Center*
 C. Thomas Smith, *Yale-New Haven Hospital*

ORGANIZATION OF STUDENT REPRESENTATIVES

Vicki Darrow, *University of Washington**
 Kimberly Dunn, *University of Texas, Houston*

DISTINGUISHED SERVICE MEMBER

Edward N. Brandt, Jr., *University of Maryland*

* Chairman of respective organization.

National Survey of Writers of Dean's Letters For Residency Applications

Lisa I. Leiden, Ph.D., and Grant D. Miller, M.D.

Abstract—The purpose of the study reported here was to provide descriptive information about dean's letters, which are comprehensive summary letters sent near the end of students' undergraduate medical training by medical school deans to be part of the students' residency applications. Deans of student affairs at 124 U.S. medical schools were surveyed regarding composition of these letters at their institution. They were asked to describe themselves and the letters they write. Responses were received from 87 percent of these schools and provided data on types of information included in the letters, the decision to edit evaluations, student participation in the letter-writing process, use of final summary statements, cost and length of letters, and attitudes toward the development of national letter-writing guidelines. Major findings of the survey show that 97 percent of the writers allocated more space for clinical evaluations than basic science evaluations. Less than 50 percent of the writers included the student's class rank. Almost all included narrative evaluations of the student's performance during the clinical years. Negative information on students was addressed inconsistently by the writers. Eighty-five percent of the writers categorized their students in final summary statements, but many of these failed to provide descriptions of the categories used or explanatory data. The present authors make recommendations for writing more credible and useful letters.

Each year dean's letters are written for every graduating medical student in the United States as part of the student's residency application. If each graduating student applied to 10 residency programs in 1985, approximately 161,800 dean's letters were mailed (1). The cost—including writers' time, secretarial time, paper, envelopes, photocopying, and postage—obviously is great and will continue to in-

crease as residency positions become harder to obtain and each student applies to more residency programs.

Even though dean's letters have been a traditional means of describing students who apply for residencies, few studies exist regarding their content and usefulness. Many residency program directors highly value dean's letters when ranking applicants (2, 3). Many directors consider dean's letters to be the most important document regarding applicants' abilities and predicted performances (4), while others consider dean's letters of little worth in providing information and forecasting future performances (5). Finally,

Dr. Leiden is director of the Office of Evaluation and Curriculum Services, and Dr. Miller is assistant dean for student affairs and associate professor in the Department of Psychiatry and Behavioral Sciences, both at the University of Nevada School of Medicine, Reno.

the extent to which the letters accurately predict future performances of physicians remains dubious (6-8).

Questions continue to be raised regarding the usefulness of letters in light of their cost. Do dean's letters provide enough detailed information to enable residency directors to discriminate potentially good from poor residents (4)? Do they describe an indiscriminate "fantasyland" where all graduates are highly recommended (5)? Do letters hurt students by withholding information (9)? Conversely, are students' chances of obtaining a desired residency reduced if negative information is included? Are dean's letters ethical and fair representations of students' abilities?

The purpose of the present study was to survey the writers of dean's letters at all U.S. medical schools to determine: what information is included, how decisions are made about editing evaluations of students, the extent to which students participate in the letter-writing process, the nature of final summary statements, estimated cost of the letters, and other concerns the writers considered important.

Method

Items to be included in the survey were generated in the following way. The present authors reviewed the literature regarding dean's letters, searching for and identifying questions and concerns. These and their own concerns were discussed by the present authors at an informal workshop at the 1984 annual western regional meeting of the Group on Student Affairs of the Association of American Medical Colleges. Twenty-eight individuals who attended the workshop, including nine deans of student affairs, generated 22 major concerns regarding letters that they felt were most important. The authors used these to develop the 23 questions

(with subitems) that made up the survey questionnaire.

The questionnaire asked about the content of the letters and the process of preparing them: the frequency with which particular types of student information were found in letters (for instance, extent of writer's contact with student, personal background, work and research experience, premedical academic performance, reasons for entry into medicine, reasons for choice of specialty, interpersonal skills, responsibility to others [that is, the student's accepting responsibility for his own actions, keeping agreements, and meeting obligations], class rank, extracurricular activities, nonprofessional interests, personality traits, and personal and professional growth), basic science course grades, clerkship grades, standardized evaluations of performance, narrative evaluations of performance, allocation of space to basic science versus clinical science evaluations, sources of writer's personal information on the student, negative or unfavorable information (for instance, physical illness, emotional instability, substance abuse, and ethical problems such as cheating), summary evaluation statements, student review of dean's letters, identification of writer (title, degree, and field), average length of letter, average annual number of letters sent for each student, average cost of letters for each student, use of microcomputers in producing the letters, and use of guidelines for writing the letters. Two open-ended items were used to elicit information on the source of information used to write personal statements about students and on how writers decide to include negative information. The other items asked for responses of yes, no, or sometimes or responses of never, sometimes, or always, depending upon the nature of the item. Comment sections were provided for all but two items related to

length of letter and use of microcomputers.

The present authors independently reviewed the comments made on the two open-ended items and identified for each item the predominant categories of responses represented by the comments. Next, the authors discussed their individual lists of these response categories and combined them into one category list for each of the two items. Each author then independently rated each item using the defined set of response categories. Agreement between the authors' ratings was achieved for better than 90 percent of the comments for each item. Comments on which the authors did not agree in their ratings were discussed and rated a second time.

During September 1984 the deans of student affairs at 124 U.S. medical schools were sent the survey questionnaire. In cases where dean's letters were written by someone else, the recipient was requested to route the survey to the appropriate person. After a single follow-up reminder, 108 surveys (87 percent) were returned. The mean class size of the responding schools was 128, with a range of 40 to 255.

Results

The results of the survey included numerical totals for each item and content analysis of the written comments. The comments quoted in the following presentation of results were selected by the authors based upon the degree to which they represented all comments for a particular item. In cases where the comments suggested two or more major points of view, each is presented.

INFORMATION IN LETTERS

The letter writers were asked to indicate on a 3-point scale (never/sometimes/always) the frequency with which they in-

cluded specific types of student information other than student grades or evaluations. The results are presented in Table 1. The respondents most often included descriptions of students' "interpersonal skills," "academic backgrounds prior to medical school," and "responsibilities to others." They least often included "reasons for choosing medicine," "reasons for choosing specialty," and statements on their "extent of contact with student."

The single area that more than 50 percent of the respondents said that they never included was class rank. Some schools did not rank their students. Other schools ranked their students but occasionally omitted such information from their dean's letters. Comments on the latter practice included: "Top 1/3 only—always." "The Dean does not want me to quote class rankings for the bottom of the class. I [indicate class rank] by quoting GPA, minimum GPA for promotion, and quoting mean GPA for the class. If it were up to me, I would give the actual rank for everybody."

Most writers included academic information. Forty-six percent reported they always included basic science grades, while 65 percent always included clinical clerkship grades. Many writers considered grades so important that they attached transcripts even though transcripts may have been independently submitted by students. Other writers provided additional descriptions of academic standing, as exemplified by comments such as: "We include a copy of the academic record which includes class rank, individual grades, N.B.M.E. scores, as well as pre-medical credentials, awards and honors received with each Dean's Letter." "Basic Science GPA is given in AMCAS terms, i.e., B, B+, A-, etc. Grades are given for required clerkships. Grades are given and [percent] of the class receiving that grade is also provided."

TABLE 1
Percentages of Writers of Dean's Letters Reporting the Frequency with Which
They Included 15 Types of General Information on Students, 1984*

Types of Information	Percent		
	Never	Sometimes	Always
Interpersonal skills	0	6.5	93.5
Academic background prior to medical school	1.9	7.4	90.7
Responsibility to others†	0	10.3	89.7
School-related, extracurricular activities	0	13.9	86.1
Research experiences	0.9	21.3	77.8
Personality descriptions	4.6	17.6	77.8
Statements regarding professional growth	3.7	37.4	58.9
Work background prior to medical school	4.6	38.9	56.5
Personal background prior to medical school	13.9	32.4	53.7
Nonprofessional interests, such as hobbies	10.2	42.6	47.2
Statements regarding personal growth‡	3.8	65.1	31.1
Class rank	57.5	15.1	27.4
Statement about extent of contact with student	29.6	50.0	20.4
Reasons for choosing specialty	29.9	54.2	15.9
Reasons for choosing medicine	42.6	54.6	2.8

* The number of responses ranged from 106 to 108 because not all respondents answered all questions.

† This item was defined as acceptance of responsibility for one's own actions, keeping agreements, and meeting obligations.

‡ This item was defined as sense of independence, purpose, and maturity.

Other respondents, though fewer, questioned the validity of grades and transcripts: "We give all 'A' grades in pre-clinical curriculum." "Transcripts provide P/F grading for all courses. However, transcript sent to program directors (or others) does not list courses that were failed and later (on re-exam) passed. These are listed as 'Pass.'"

The finding that basic science grades were reported less often than clerkship grades is parallel to the finding that 97 percent of the respondents allocated more space to clinical evaluations than to basic science evaluations. Comments on this issue explained the writers' reasoning:

"We only have grades in basic sciences, not written evals." "We comment on each course—basic science and clinical. The comments provided to us by clinical departments tend to be longer and therefore those sections of the Dean's Letter are longer." "I believe clinical science information is much more germane to residency program directors." "Basic Sciences are means to an end, not an end in themselves for the M.D. degree." Eighty-five percent stated that they included narrative evaluation information for each clerkship.

The questionnaire asked respondents about the evaluation forms used and the

extent to which they were standardized. The evaluation forms used in basic science courses and clerkships were not always standardized within the school. However, 53 percent of the respondents reported that their basic science departments used common forms, and 63 percent of the respondents reported that their clinical departments used common forms. Their comments revealed that three situations existed concerning the presence and use of standard evaluation forms. First, some schools did not have standardized forms; that is, each department developed a unique evaluation form. Second, some schools had developed standardized evaluation systems, but these were used irregularly by departments and/or evaluators. Third, some schools had one standard evaluation form for basic science courses and another standard form for clerkships; these forms were consistently used by evaluators.

Respondents at schools that did not use standard evaluation forms were asked whether they would prefer to have such forms standardized. Fifty percent responded yes. The respondents' comments emphasized the difficulty of establishing uniform evaluation systems because of individual departments' needs to develop specific forms.

Though most respondents agreed on including narrative evaluations, they varied on the extent to which they edited these evaluations. Forty percent included unedited comments, 31 percent sometimes included unedited comments, and 30 percent did not include unedited clerkship evaluations. The respondents' comments provided reasons for the variations: "Unedited to the degree possible. Most narratives need some editing: converting sentence fragments into complete sentences, eliminating sexist comments, etc." "In most cases the entire narrative is recorded in the Dean's Letter. Sometimes

it is edited for: 1) space, or 2) deleting of an inappropriate negative or of a euphoric (usually house-staff) piece of buffoonery."

The writers most often edited for grammatical errors, excessive length, and repetition. For example: "It depends entirely on length. If I get a suitable sized summary (or even individual quotes) from a department, I quote it verbatim. If they give me a solid page of comments, I have to make my own summary."

Other decisions to edit pertained to negative comments and whether their inclusion in the letter would limit a student's chances of receiving a residency position. Relevant comments included: "If comments are distinctly aberrant for the student, they may not be included." "Usually unedited comments are included from most evaluators. Comments which are judged to be 'off the wall' are excluded with the use of '...'." "I extract appropriate comments, protecting students from spurious comments."

In response to a question on whether the letters identified the authors of evaluation comments, 59 percent of the respondents reported that they identified the original evaluator, 18 percent reported they sometimes identified the evaluator, and 23 percent reported they did not identify the evaluator. Comments provided by 32 percent of the respondents revealed that specific names were usually not included but that positions, ranks, or departments of the evaluators were usually given.

The writers were asked how often they reported negative information on students, including physical illness, emotional instability, substance abuse and ethical problems, such as cheating. The responses showed that writers were more likely to discuss instances of physical illness and emotional instability than substance abuse or ethical problems (Table 2).

TABLE 2

Percentages of Writers of Dean's Letters Reporting the Frequency with Which They Included Four Types of Negative Information on Students, 1984*

Type of Information	Percent		
	Never	Sometimes	Always
Physical illness	4.2	70.8	25.0
Emotional instability	3.2	68.8	28.0
Substance abuse	32.4	28.4	39.2
Ethical problems†	24.7	34.6	40.7

* Responses ranged from 81 to 93 because not all respondents answered all questions.

† Ethical problems were defined by suggesting the example of cheating.

The writers who reported negative information in one area were more likely to report negative information in another area. Significant chi-square values ($p < .001$) were found for each comparison. Despite significant chi-square values, the percentages of writers who never included descriptions of physical illnesses and emotional problems (4.2 percent and 3.2 percent, respectively) were appreciably lower than those who never described substance abuse or ethical problems (32.4 percent and 24.7 percent, respectively). When asked to estimate the annual mean number for each problem, the writers estimated 2.2 incidences of physical illness, 1.8 incidences of emotional instability, 0.7 cases of substance abuse, and 0.8 cases of ethical problems.

In addition, the writers were asked to describe briefly how they decided whether to include negative information in their letters. Ninety-two percent of the respondents provided 122 separate comments on this issue, with some writers making more than one separate comment. Thirty-four percent of the comments indicated that decisions to include negative information were based on the extent to which the event or issue had affected a student's performance during

medical school or could affect a student's performance as a resident. Delays or interruptions in schooling were frequently cited as evidence of how performance was affected. Another 18 percent of the comments indicated that some writers included problems that had resulted in repeated negative evaluations, as explained by the following comments: "If a recurrent theme," "If it is obvious or is commented on by more than one independent observation in more than one setting."

Eleven percent of the comments indicated that the decision to include negative information was based on whether the problem was disclosed in the official academic file. For example, administrative action may have been taken and documented, or a problem or problems may have been included in official evaluation reports. Inclusion of such data in official files apparently indicated that the problem was proven to exist. Another 9 percent of the comments indicated that writers described negative student problems in their letters without the benefit of guidelines. And finally, 7 percent of the comments were from writers who felt that no inclusion was necessary because problems result either in dismissal, in which case no letter is needed, or in problem resolution, in which case no problem exists.

Dean's letters are often concluded with a final summary statement evaluating the student's overall abilities. Eighty-five percent of the respondents included such a statement in their letters. However, only 24 percent of the respondents gave the percentage of students falling into each category used to describe abilities, such as "Above Average = 25%, Average = 50%, Below Average = 25%."

Nearly one-third of the respondents commented on the use of final state-

ments, and many of them described the categories used in their dean's letters: "Outstanding, excellent, very good, good." "Recommend, recommend highly, recommend very highly, recommend in highest terms." "Strongest of year = 1 [percent], very strong = 9 [percent], strong = 28 [percent], very good = 44 [percent], good = 15 [percent], recommend = 2 [percent]." "Recommend with enthusiasm, recommend with confidence, recommend without reservation, recommend for consideration, recommend with reservation, do not recommend."

LETTER-WRITING PROCESS

Deans of student affairs were primarily responsible for writing dean's letters at 58 percent of the responding schools. At 3 percent of the schools, the letters were written by deans of academic affairs; at 3 percent, they were composed by a committee of faculty members; at 2 percent, they were written by the student's faculty adviser; and at 1 percent they were written by the dean of the medical school. A response category labeled "other" was selected by 33 percent of the schools. The respondents' comments indicated that in these latter cases other deans or administrators were responsible for and might share the writing task, often with the help of an administrative assistant.

At the 60 responding schools where a single individual had the responsibility for writing dean's letters, 72 percent of the writers were physicians. Thirty-five percent of these physicians were internists, 20 percent were psychiatrists, 10 percent were pediatricians, 3 percent were neurologists, 3 percent were gynecologists, and 29 percent were in other medical disciplines (for instance, pathology, surgery, or family practice). Eighteen percent of the writers held Ph.D. degrees in basic

science fields, typically in physiology and anatomy, and an additional 10 percent had Ph.D. degrees in other disciplines, such as psychology.

The writers were asked to list three sources of information used to write personal statements that referred to students' personal growth in medical school, leadership capabilities, maturity, responsibility to others, and interpersonal skills. The source most often cited was written student evaluations, usually found in the students' academic files. Other sources, listed in the order the respondents most frequently listed them, were personal conferences and interviews, student-composed biographical statements, complete student files, personal knowledge of student, and other information from faculty and administrative records.

The respondents were in strong agreement over students' review of drafts of dean's letters. Eighty-two percent of the respondents gave students at least one opportunity to review their letter. The respondents' comments suggested that the word "review" may hold different meanings for different writers. At some schools, "students must initiate the request"; at others, the letter "will not be accepted by my office unless the student has signed [to acknowledge having reviewed] it." The sections of the letter that the student was permitted, encouraged, or asked to review also varied. Comments included: "They change little, but I always accept changes in 'my opinion' statements. No fact changes, of course." "They may change errors of fact, but not opinions." In summary, there was high agreement among writers that students should review their dean's letters but disagreement about what changes students may make.

The mean length of letters reported by the responding schools was 2.5 single-

spaced pages. Four percent of the schools sent letters that were one page long or less; 53 percent sent two-page letters; 30 percent sent three-page letters; and 14 percent sent letters that were four pages long or more.

An average of 16 dean's letters were mailed for each student. Examples of the ranges and respondents' comments were: For 10-30 letters on average—"Hard to 'average.' Depends on field of choice, couples match, etc. We send out whatever they ask for." For 18 letters on average—"Number sent out for Orthopedics and Ophthalmology averages 25-30." For 12-20 letters on average—"This year's total will be highest ever. Number increases each year and seems to be taking a big jump this year." "Varies considerably." For 35 letters on average—"Too many." For 12 letters on average—"Maximum 44. Total for 1984 graduating class = 2710."

The writers were asked to estimate the cost per student of preparing dean's letters by taking into consideration the number of staff members, hours of labor, and materials involved in producing the letters. Only 52 percent of the respondents provided estimates, and the mean estimated cost per student was \$125, with a cost range of \$10 to \$750 for each student. The comments made by the 55 percent of the respondents who commented on the issue indicated that many had no idea of the cost and had never made an estimate. Comments included "incalculable" and "afraid to find out."

Fifty-four percent of the schools used microcomputers to prepare the dean's letters. Comments by the respondents who did not use microcomputers revealed that many of them used other computer systems, such as minicomputers or mainframe computers. If this latter group is included, the proportion of writers using computers totaled 68 percent.

Forty-seven percent of the respondents used written guidelines developed at their institution in preparing dean's letters. The comments of those who did not use guidelines suggested that, while written guidelines might not exist, standard formats were often used. When asked whether they would favor national written guidelines, 60 percent stated that they would not. Their disapproval was based upon uncertainty about whether a consensus could be reached, whether guidelines would be followed if enacted, and whether guidelines would be able to integrate interschool variability in curricula and grading systems.

The writers were given an opportunity to list and discuss letter-writing concerns that had not been addressed in the questionnaire. Issues mentioned ranged from worry over the ever-increasing numbers of letters sent out each year to the heavy work load required to prepare them. Three issues concerned most of the 54 writers who addressed this question: the pressure for earlier and earlier letters, the value of the letters, and the challenge of writing appropriate or representative letters for each student.

Discussion

The purpose of the study reported here was to determine how dean's letters are composed at U.S. medical schools and what information they contain. One clear finding from this study was the strong commitment and dedication that the writers had for the task of writing dean's letters. This commitment was apparent in the high response rate (87 percent) and lengthy and numerous comments, even though the survey was mailed in September, the peak of the season for writing dean's letters. The high response rate also may reflect the need for the information provided by this study or may indicate

the survey's value as a therapeutic release from the task of writing.

The authors feel that a number of specific problems were highlighted by this study. They include: (a) basic science grades and evaluations were reported less often than clinical grades and evaluations; (b) some writers edited or summarized narrative evaluations to the extent that the letter's credibility was questionable; (c) most writers were hesitant to mention impairments or include information on failed courses; (d) letters did not always document leaves of absences or administrative actions; (e) some writers gave class rank for top students only; (f) approximately 40 percent of the evaluations used were not standardized; (g) many final summary statements contained only positive descriptions; (h) final summary statements often categorized students' capabilities but did not describe the percentage of class members in each category; and (i) letters were often too brief.

It was not surprising to the authors to find such problems since no national guidelines exist. Despite the lack of guidelines, however, many schools follow similar procedures in composing dean's letters. For instance, 91 percent of the respondents included descriptions of students' premedical academic backgrounds, and 65 percent provided all clerkship grades.

The provision of more information on clerkships than on basic science course work may be explained, in part, by the lack of narrative evaluations provided by most basic science courses. Additionally, since 72 percent of the letter writers in this survey were physicians rather than basic scientists, the physicians may have attributed greater importance to clerkship evaluations.

Writers who emphasize clerkship grades and evaluations may assume that basic science grades and evaluations are

of little value in predicting future performance. This may be an erroneous assumption, since early identification of problems of students may be made during the basic science years, as reported by the first author in a paper presented at the 1982 Conference on Research in Medical Education of the Association of American Medical Colleges and as discussed at a symposium headed by Dr. Ronald Franks of the University of Colorado School of Medicine at the 1985 Conference on Research in Medical Education.

The issue of editing narrative evaluations appears to be complicated. The burdensome task of deciding which information to include or exclude and which material to edit confronts writers with any letter. The respondents' comments suggest that writers typically adopt their own definitions of editing. For some, editing means condensations necessary to achieve succinctness; for others, it means minor grammatical corrections; and for still others, it means a judgment on the validity of the evaluations themselves. These variations offer a partial explanation for the finding of low agreement among respondents over including unedited narrative evaluations. It is clear, however, that editing is widespread and is done for practical reasons and as a way to obscure information.

Policy differences among schools on what information to include and how much to edit may be related to varying loyalties of writers to students. When a writer is loyal to students, exclusion of negative information and editing to present the most favorable impression may occur. When a writer is more concerned about the student's future patients, unedited narrative evaluations, some containing unfavorable comments, may be included.

Regarding potentially negative student information, the writers were more likely

to discuss physical illness and emotional instability than substance abuse and ethical problems. Information was withheld ostensibly to improve a student's chances of obtaining a residency. Findings from the survey suggest that some letter writers omit negative information in spite of the fact that, as Yager reported (10), some residency program directors have noted inconsistencies in letter-writing standards and in some cases have written to medical school deans alerting them of their concerns.

The issue of giving information on students' class rank continues to be controversial. One study (11) showed that students whose dean's letters do not include class rank received lower rankings from one residency program than students whose class ranks were included. Data from the present study indicate that inclusion of class rank depends on whether a school ranks its students and on whether the school feels it is beneficial to include such information for each student. The authors believe that writers should include students' grades and the grade distributions for each course.

The issues surveyed and reported here illustrate the complex task that confronts the letter writer, a responsibility that traditionally has been passed from one student affairs dean to the next, possibly without any training being provided. The task of letter writing, especially for large medical classes, may well be too difficult for a single individual, especially when nagging ethical decisions arise. The authors feel that national guidelines could be a useful mechanism for handling these difficulties. In addition, individual medical school administrations should take a larger and more active role by creating school policies on which information should be included and how questions are to be addressed. At the very least, including more than one person in the letter-

writing process would foster a wider awareness of the difficulties inherent in letter writing and minimize bias by writers.

To increase the credibility and usefulness of dean's letters, the present authors suggest that writers: (a) express the extent of the writer's contact with students and, if personal contact is very limited, consider altering the process so that those knowing the student write the letters; (b) write a personal description of the students that addresses their interpersonal skills, integrity, and sense of responsibility; (c) take steps to develop uniform evaluation forms and procedures within each school; (d) include unedited evaluations from both basic science courses and clerkships; (e) provide the grade distribution for each course, but do not give class rank; (f) document leaves of absence, failed courses, administrative actions, and problems that may affect treatment of patients; (g) provide a distribution of ratings or categories to help assess the meaning of final statements; (h) allow students to review drafts of their letters and have them sign release statements; and (i) furnish curriculum vitae that include extracurricular and leisure activities, transcripts, and personal statements as addenda to the letter.

References

1. GRAETTINGER, J. S. Results of the NRMP for 1985. *J. Med. Educ.*, **60**:498-500, 1985.
2. WAGONER, N. E., and GRAY, G. T. Report on a Survey of Program Directors Regarding Selection Factors in Graduate Medical Education. *J. Med. Educ.*, **54**:445-452, 1979.
3. WAGONER, N. E., SURIANO, J. R., and STONER, J. A. Factors Used by Program Directors To Select Residents. *J. Med. Educ.*, **61**:10-21, 1986.
4. TARDIFF, K. The Effect of Pass-Fail on the Selection and Performance of Residents. *J. Med. Educ.*, **55**:656-661, 1980.
5. FRIEDMAN, R. B. Fantasyland. *N. Engl. J.*

- Med.*, **11**:651-653, 1983.
6. STIMMEL, B. Letters of Recommendation. *J. Med. Educ.*, **57**:427, 1982.
 7. CLEMENTE, M., and MICHENER, W. M. The Dean's Letter of Recommendation and Internship Performance. *J. Med. Educ.*, **51**:590-592, 1976.
 8. STANTON, B. C., BURSTEIN, A. G., and KOBOS, J. C. The Dean's Letter of Recommendation and Resident Performance. *J. Med. Educ.*, **54**:812-813, 1979.
 9. MARIENFELD, R. D., and MENGEL, C. E. The Dean's Letter: The Preclinical Years Neglected. *J. Med. Educ.*, **56**:354-356, 1981.
 10. YAGER, J., STRAUSS, G. D., and TARDIFF, K. The Quality of Dean's Letters from Medical Schools. *J. Med. Educ.*, **59**:471-478, 1984.
 11. GUTMAN, L. T., and GRUFFERMAN, S. Impact of Medical School Class Ranking Systems on Applicants' Ratings for Residency Positions. *J. Med. Educ.*, **60**:684-691, 1985.

Policies of U.S. Medical Schools on the Use Of the NBME Part I and Part II Examinations

G. Dean Cleghorn, Ed.D.

Abstract—The study reported here provides information on National Board of Medical Examiners (NBME) examination policies from all U.S. medical schools ($n = 67$) that require students to pass the examination. Most of these schools have similar policies on use of a 380 total score as the passing level for the NBME Part I examination, allowing three attempts to pass the examination, interrupting a student's progress into the clinical curriculum upon failure of the examination, officially providing time for preparation for taking the test, and requiring students to pass the Part II examination.

Each year some students fail the Part I examination of the National Board of Medical Examiners (NBME), and most of them have their medical education interrupted as a consequence. Medical school promotions boards, deans, and students experience significant problems dealing with the practical and psychological effects of these examination failures. Inevitably, stories have circulated about how "other schools" handle the use of NBME examinations "better." For administrators, faculty members, and students who confront this situation, these anecdotal stories can raise questions about their school's policies. Before schools consider questions that could result in policy change, however, they need to know more about what really happens at other schools.

The Association of American Medical Colleges (AAMC) (1, 2) provides some

information on schools' policies on using the examinations, but it is limited to noting each school's requirements for taking and/or passing the examinations. In the last 10 years the number of schools requiring students to pass the NBME Part I examination has increased from 40 to 67 (1, 2). Hyde and colleagues (3) reported variations in performance on the examination based on the school's requirement policies. Litzinger and Welker (4) observed that most schools that required students to pass the Part I examination further required students who failed it to delay progress into the clinical curriculum. Other than these studies, little has been written on the specific policies of schools that require students to pass the Part I examination. In the present study, the author sought to provide information on medical schools' policies regarding use of these examinations.

Methods

A questionnaire was constructed by the author to gather information about the

Dr. Cleghorn is assistant dean for academic affairs and an associate professor of educational psychology, University of Tennessee, Memphis, College of Medicine.

policies and practices of the 67 U.S. medical schools that require students to pass the NBME Part I examination. The 10-item questionnaire asked whether the passing score required was based on the national passing level of 380 or on local norms. It asked whether students were required to pass each subtest of the examination, how many times students were sponsored to take the examination, whether the student's progress in the curriculum was interrupted if the student failed the test, how much time was officially allocated for review for the examination, and how many students had been dismissed primarily due to failure on the examination. Two items were related to the NBME Part II examination.

In November 1985 the questionnaire was mailed to the 67 U.S. medical schools that required students to pass the NBME Part I examination, as reported by the AAMC (1). The schools were asked, at their option, to send a copy of their written policies with the returned questionnaire. Follow-up telephone interviews were conducted in February 1986 with representatives from schools that did not return the questionnaire.

Results

From the initial mailing, 85 percent ($n = 57$) of the questionnaires were returned. The remaining 10 schools were contacted, and the questionnaire was completed by telephone. Therefore, the data presented here include all schools that required students to pass the NBME Part I examination in 1986. Table 1 presents a summary of the responses to the questionnaire.

The questionnaire asked for open-ended elaboration on the item concerning the interruption of a student's progress in the curriculum. These responses fell into two major categories—schools that required a student who failed the examination to withdraw from the curriculum

immediately and schools that allowed the student to progress in the clinical curriculum prior to passing the examination on a second attempt. Of the 57 schools where failure caused an interruption in a student's progress, 38 schools (67 percent) required these students to withdraw completely until they passed the examination. In the second category, 19 schools (33 percent) allowed students to take some but not all of their clinical work prior to recording a passing score.

Regarding time officially allocated to study for the examination, there were 46 quantifiable responses; these showed an average of 3.2 weeks of study time. This average does not include the 16 schools (24 percent) that reported no time allocated for study.

Twenty-four schools reported a total of 68 academic dismissals related to failure on the Part I examination during the three years prior to the survey. The dismissals took place after the students had failed the examination from two to four times.

Six dismissals at three schools during the three years prior to the survey related to failure of the NBME Part II examination. Three other students at one school were delayed in graduation because they failed the Part II examination.

Information from the survey indicated a relationship between a requirement for passing the NBME Part I examination before promotion to clinical courses and academic dismissals because of failures on the examination. That is, for the 10 schools at which promotion was not contingent on passing the examination, no students had been dismissed during the past three years because they had failed it. As noted previously, some students at 24 of the other 57 schools had been dismissed during the same period because they had failed the NBME Part I examination.

TABLE 1
Percentages of 67 U.S. Medical Schools with Specific Policies on the Use of
the National Board of Medical Examiners (NBME) Part I and Part II Examinations, 1986

Policies	Percent			
	Yes	No	No Response	Other
Part I examination				
Use national norms for passing score	90	10		
Use local norms for passing score	9	3	88	
Require passing of each subtest	6	91	3	
Sponsor second attempt automatically after one failure	78	22		
Sponsor third attempt automatically after two failures	66	34		
Interrupt student's progress into clinical curriculum after failure	85	15		
Allocate time officially for review	75	24	1	
Have dismissed students in past three years for failing examination	36	58	1	5
Part II examination				
Require passing	72	27	1	
Have dismissed students in past three years failing examination	6	82	11	1

Nine of the 23 schools that did not automatically allow students a third attempt to pass the test dismissed 38 students who had failed the examination during the past three years. Of the 44 schools that did automatically sponsor a third attempt, 15 schools dismissed 30 students who had failed the examination during the same period. Proportionally, then, the schools that did not automatically sponsor three attempts to pass the examination dismissed more than twice as many students who failed it than did the schools that automatically sponsored three attempts.

Discussion

Most schools that required students to pass the Part I examination were similar in: defining the passing score at 380, using total score rather than subtest scores to determine passing, allowing three attempts to pass, interrupting progress in the curriculum when a student failed,

providing time for preparation for the test, and requiring students to pass the NBME Part II examination. However, there were differences in policies among the medical schools.

The lack of dismissals because of failures on the examination at schools without a promotion requirement raises some questions. Since these schools required passing the examination for graduation and since they had not dismissed students, they must have had a high success rate in students passing the test at some point. Does the promotion requirement have an adverse effect on the ability of students to pass the Part I examination? It is possible that some inherent factor reduces students' anxiety about the examination when promotion is not at stake and that, therefore, the students perform better on the examination. The author has counseled many students whose anxiety has seemed to interfere with their preparation for and performance on the

examination. Further, students who begin clinical training before passing the examination may better learn many basic science concepts after exposure to their application in the clinical setting. If either of these latter two explanations is true, the schools that require students to pass the NBME Part I examination for promotion should reexamine that policy.

Most of the schools routinely allowed students three attempts to pass the examination. Some, however, were more restrictive and, consequently, reported more incidences of dismissals. On the other hand, some schools were even less restrictive and reported instances of exceptional cases where they petitioned the National Board of Medical Examiners to allow students to take the examination a fourth time. The author believes, based on the policies reviewed, that differences among schools on the number of times allowed for taking the examination reflect differing opinions regarding the importance of the examination in measuring overall student competence. More dismissals at schools that allowed fewer attempts suggest a strong commitment to the examination's value in measuring student competence irrespective of other academic measures.

The schools that required students to pass the NBME examinations for promotion displayed more similarity than dissimilarity in policies on issues related to the examinations. In the author's opinion, the similarity developed because of

logistical reasons. On one hand, withdrawing the students from the curriculum is important in order to allow the students ample study for retaking the examination. On the other hand, not withdrawing the students from the curriculum may be important for scheduling reasons, since clerkships are begun at many schools before examination scores are available. Therefore, schools with similar curriculum structures may have similar policies concerning the examinations. Differences among U.S. medical schools in policies on the use of NBME Part I and Part II examinations are less notable than the similarities, but they probably reflect real differences in faculty opinions on the value of the examinations and differences in logistical concerns.

References

1. WILSON, V. (Ed.). 1985-86 *AAMC Curriculum Directory*. Washington, D. C.: Association of American Medical Colleges, 1985.
2. WILSON, V. (Ed.). 1976-77 *AAMC Curriculum Directory*. Washington, D. C.: Association of American Medical Colleges, 1976.
3. HYDE, R. M., KRUG, R. S., and DEARNER, J. F. Performance on NBME Part I Examination in Relation to Policies Regarding Use of Test. *J. Med. Educ.*, **60**:439-443, 1985.
4. LITZINGER, M. J., and WELKER, W. J. A Survey of the Review Programs for the Part I Exam of the National Board of Medical Examiners. *J. Med. Educ.*, **54**:111-112, 1979.

Mental Health Education In Three Primary Care Specialties

*James J. Strain, M.D., Harold Alan Pincus, M.D.,
Leslie Hartley Gise, M.D., and Jeffrey Houpt, M.D.*

Abstract—The authors used a questionnaire to examine the characteristics of the mental health components of residency training in traditional internal medicine, primary care internal medicine, and family practice. Traditional internal medicine programs relied almost exclusively on the consultation method and inpatient facilities, offered little formal instruction, used the psychiatrist as the primary teacher, and spent considerably less per resident for mental health training than the other programs. Psychologists and social workers as a group were the primary mental health teachers in family medicine residencies. Traditional internal medicine programs emphasized psychophysiological reactions and simple pharmacotherapy, while primary care internal medicine and family practice programs concentrated on life cycle issues, psychosocial awareness, and simple psychosocial management techniques. None of the three types of residencies focused on complex psychiatric disorders or management techniques. The three specialties differed significantly ($F = 13, p = .0001$) in the total amount of time on average the resident spent in formal mental health instruction. The need for evaluation of the outcome of training is also discussed.

The role of psychiatry in the mental health training of residents in primary health care has never been clearly defined from either the perspective of psychiatry or of the primary care specialties. But data are available that stress the need to re-evaluate psychiatry's contribution to

mental health training in this sector of medicine. The President's Commission on Mental Health (1), citing the work of Regier and colleagues (2), and more recently the epidemiologic catchment area study (3) indicate, respectively, that 15 percent and 18.2 percent of Americans experience diagnosable alcohol, drug abuse, and/or mental disorders in any six-month period. Of these individuals, 8.3 percent experience anxiety disorders; 6 percent, affective disorders; 5 percent, alcoholism; and 29 percent, drug abuse.

Despite the fact that 60 percent of the individuals with such disorders are seen only in the primary care sector, primary care providers rarely recognize these disorders; and once identified, the disorders

The research reported here was supported by contract 0D-82-0015 from the National Institute for Mental Health.

Dr. Strain is professor and director and Dr. Gise assistant professor and associate director, Psychiatry Consultation/Liaison Service, Mount Sinai School of Medicine of the City University of New York, New York City; Dr. Pincus is director of research, American Psychiatric Association, Washington, D. C.; and Dr. Houpt is professor and chairman, Department of Psychiatry, Emory University School of Medicine, Atlanta, Georgia.

are frequently not treated or referred appropriately (4-6). Several circumstances keep mentally ill patients within the domain of the primary care physician. First, the number of medical students who entered the specialty of psychiatry declined significantly from 1970 to 1981 (7). Through the 1990s, psychiatry will continue to experience a shortage, with insufficient numbers to deal with even the major psychiatric syndromes (8). Furthermore, many patients with significant mental disease remain reluctant to use the services of a psychiatrist. That the usual cost of a psychiatrist per visit is greater than the cost of a primary care physician per visit further fosters patient resistance. Consequently, the majority of mental health care is delivered by physicians other than psychiatrists.

Since some studies (9) have demonstrated that 15 to 50 percent of all patients who visit primary care physicians evidence some emotional or cognitive disorder, psychiatry's role in the general health sector needs to be defined. The question of psychiatry's role was also raised in a report (10) that described the effect of behavioral factors on the development, onset, course, and treatment of physical disorders. Furthermore, investigators have reported (11) that psychological interventions in general health care settings not only improved overall care but also reduced total health care costs. Although the American Board of Internal Medicine, the American Medical Association, and the American Academy of Pediatrics have advocated mental health training for their members, the place of psychiatry in these training programs remains uncertain (12).

In the present paper, the authors describe the characteristics of the mental health components of residency training programs in three primary care specialties: traditional internal medicine, pri-

mary care internal medicine, and family practice.

Methods

In order to evaluate mental health training in these three primary care specialties, in 1984 the authors developed a study based on a sample drawn from 50 primary care internal medicine, 400 family practice, and 400 traditional internal medicine residency programs. All 50 primary care internal medicine programs were selected for the study; using random sampling techniques, the authors selected 100 family practice programs and 100 traditional internal medicine programs.

A questionnaire was developed and tested at 35 primary care training programs not included in the 250 programs selected for the study. The questionnaire contained 49 open-ended questions that asked for information concerning mental health training: methods of teaching, disciplines of teachers, administrative organization of the program, content taught (with definitions of types of content provided), use of evaluation, kinds and amounts of funding, and demographic characteristics of the residents. To facilitate visits by the authors, the 35 programs selected to assist in developing the questionnaire were in the northwestern United States. When the authors visited the sites of these programs, they asked the program directors to respond to the questions and comment on their clarity, completeness, and need for refinement. Based on their comments, additional categories of content and skills taught were added: techniques for interviewing families and understanding family systems, sexual dysfunction, and mental health issues in geriatrics.

After these revisions were made, the questionnaire was mailed to the program directors of the 250 programs chosen for

the study. In a preliminary telephone call, the investigators announced that a survey form would be sent and encouraged the directors to call for assistance if needed. If a program director did not respond within four weeks, a second telephone call was made. Of the 250 programs, 42 in primary care internal medicine, 67 in family practice, and 38 in traditional internal medicine responded, for a total of 147.

Chi-square and analysis of variance techniques, discriminant function analysis, and Duncan's multiple range test were used to analyze the responses.

Results

Traditional internal medicine programs used the consultation of a psychiatrist for an average of 67.9 percent of their mental health training, while primary care internal medicine and family practice programs used the psychiatric consultation for 30 percent and 22.5 percent, respectively, of their mental health teaching (significant for each comparison, $F = 41$, $p = .0001$).

Sixty-five percent of the family practice programs used some form of block rotation in a mental health facility, compared with 25 percent of the primary care and 13 percent of the traditional internal medicine programs. Family practice and primary care internal medicine were significantly different from traditional internal medicine (chi-square = 33.3, $p = .0001$) and from each other. Traditional internal medicine programs performed 80 percent of their teaching of mental health knowledge using inpatients, while primary care internal medicine and family practice used inpatients 25 percent and 18.7 percent of the time, respectively (significantly different from traditional internal medicine, $F = 70$, $p = .0001$).

The three specialties differed significantly ($F = 13$, $p = .0001$) in terms of the total amount of time during the residency the average resident spent in formal instruction in mental health: lectures, specific conferences, scheduled case conferences, encounter groups with patients, and Balint groups. (Balint groups are twice monthly training groups for primary care physicians led by a psychiatrist.) In regard to the disciplines of the teachers of mental health issues, several significant differences were observed and are shown in Table 1. The three specialties differed in the extent to which they used psychiatrists, psychiatry residents, psychologists, and primary care physicians as teachers of mental health.

The three specialties were significantly different with regard to their administrative affiliation (chi-square = 63, $p = .0001$). Traditional internal medicine was much more likely to have the hospital's department of psychiatry administer the mental health training (80 percent) than were family practice and primary care internal medicine programs, where 49 percent and 41 percent of the training, respectively, was administered jointly by the department of psychiatry and the primary care specialty involved and 42 percent and 43 percent, respectively, solely by the primary care specialty.

The three specialties also differed significantly in the relative emphasis placed on areas of mental health knowledge and skills. This was particularly true of the areas of life cycle issues (for example, the birth of a child) and the organic mental syndrome, as shown in Table 2. Similarly, they differed in their emphasis on skills, particularly complex psychosocial management and specialized psychotherapies, as shown in Table 3.

Twenty-three percent of the traditional internal medicine programs had no eval-

TABLE 1

Mean Percentages of Teachers of Mental Health Issues and Skills in Family Practice, Primary Care Internal Medicine, and Traditional Internal Medicine Residency Programs, by Profession of Teachers, 1984

Profession	Residency Programs*		
	Family Practice (n = 67)	Primary Care Internal Medicine (n = 42)	Traditional Internal Medicine (n = 38)
Psychiatrists	18.7	39.0	61.0
Psychologists	37.0	11.6	6.0
Social workers	18.0	17.0	8.0
Nurses	.8	3.0	2.0
Psychiatry residents	0.0	3.0	13.0
Primary care physicians	15.5	20.0	6.0
Clergy	1.0	.3	.1
Other professionals†	8.0	6.0	3.0

* The three specialties differed significantly in terms of using psychiatrists ($p = .001$), psychologists ($p = .05$), psychiatry residents ($p = .01$), and primary care physicians ($p = .001$).

† Other professionals included sociologists and mental health technicians.

TABLE 2

Percentage of Mental Health Training Time Devoted to Teaching 10 Knowledge Areas in 67 Family Practice, 42 Primary Care Internal Medicine, and 38 Traditional Internal Medicine Residency Programs, 1984*

Knowledge Areas‡	Residency Programs†		
	Family Practice	Primary Care Internal Medicine	Traditional Internal Medicine
Sociocultural issues	6.9	14.0	5.4
Life cycle issues	22.6	10.0	6.8
Behavioral health risks	12.4	10.4	9.4
Psychophysiologic disorders	14.9	14.0	13.0
Organic brain syndromes (other than geriatric)	6.5	10.0	14.3
Anxiety and depressive disorders (nonpsychotic)	16.8	16.5	12.3
Complex psychiatric disorders	7.0	8.3	7.7
Alcoholism and substance abuse	9.5	10.7	13.2
Sexual dysfunction	7.4	6.6	5.3
Mental health issues in geriatrics	5.6	6.6	7.0

* Respondents were asked to give information on time so that it would total 100 percent, but some responses for family practice and primary care internal medicine programs exceeded 100 percent, while some responses for traditional internal medicine programs totaled less than 100 percent.

† The three specialties differed significantly in terms of time devoted to life cycle issues and organic brain syndromes ($p = .001$).

‡ The knowledge areas were defined in the questionnaire.

TABLE 3
Percentage of Mental Health Training Time Devoted to Teaching Nine Skills in
67 Family Practice, 42 Primary Care Internal Medicine, and 38 Traditional
Internal Medicine Residency Programs, 1984*

Skills	Residency Programs†		
	Family Medicine	Primary Care Internal Medicine	Traditional Internal Medicine
Awareness of psychosocial issues	15.8	15.3	11.3
Techniques for interviewing patients	14.3	16.7	12.0
Techniques for interviewing families and understanding family systems	10.4	6.9	5.2
Diagnosis, detection, and referral	12.0	14.5	16.4
Simple psychosocial management techniques	17.0	16.0	15.0
Complex psychosocial management techniques	7.5	4.0	3.4
Simple pharmacotherapy	11.7	16.5	24.0
Complex somatic treatments	4.2	3.0	3.9
Specialized psychotherapies	7.0	4.0	3.2

* Respondents were asked to give information on time so that it would total 100 percent, but some responses for primary care internal medicine and traditional internal medicine totaled less than 100 percent.

† Significant differences were found among the three types of residencies in the skills of complex psychosocial management techniques ($p = .0001$) and specialized psychotherapies ($p = .0006$).

uation methods to test the effectiveness of their teaching of mental health knowledge and skills, whereas family practice and primary care internal medicine reported the use of some evaluation method in 100 percent and 92 percent of their programs, respectively (chi-square = 16.3, $p = .0003$). Family practice was more likely to report formal evaluation methods than either of the other specialties (chi-square = 12, $p = .0027$). The specialties also differed significantly on whether the instructor used standardized evaluation forms (chi-square = 19.4, $p = .0001$), informal oral questioning (chi-square = 18.2, $p = .0001$), formal written examination (chi-square = 7.6, $p = .02$), and formal chart review (chi-square = 16.5, $p = .0003$) to ascertain the residents' knowledge and understanding of psycho-

social content. Overall, family practice programs consistently used each evaluation method more often than either of the other two types of programs.

Thirty-five percent of the funds for mental health training in traditional internal medicine programs was paid exclusively by the hospital's department of psychiatry, in contrast to 15.5 percent of primary care internal medicine and 6.3 percent of family practice programs, respectively, as shown in Table 4. Primary care internal medicine programs had significantly greater support from the Health Resources and Services Administration (HRSA) than family practice or traditional internal medicine ($p = .01$). Primary care internal medicine and traditional internal medicine programs had more grant support from the National

TABLE 4

Percentage of Funds from Five Sources for Salaries for Mental Health Teachers in 67 Family Practice, 42 Primary Care Internal Medicine, and 38 Traditional Internal Medicine Residency Programs, 1984

Sources of Funds	Residency Programs*		
	Family Practice	Primary Care Internal Medicine	Traditional Internal Medicine
Fees for service	16.0	12.0	18.0
Grants	18.0	63.0	23.0
Primary care department†	51.0	5.8	11.0
Psychiatry or mental health division	6.3	15.5	35.0
Other‡	8.7	2.7	13.0

* Differences among the three types of programs were significant ($p = .01$) for all sources except fees for service.

† Other than "psychiatry or mental health division" and "other."

‡ For example, private foundations and medical schools.

Institutes of Health than family practice ($p = .01$). Mean salary costs per year for all mental health teachers in the programs were: family practice, \$66,296; primary care internal medicine, \$48,058; and traditional internal medicine, \$44,807. Mean costs per program for each resident per year were: family practice, \$4,014; primary care internal medicine, \$2,289; and traditional internal medicine, \$1,120.

The mean numbers of residents were significantly different in family practice, primary care internal medicine, and traditional internal medicine programs: 22, 21, and 40, respectively ($p = .001$). The three specialties were also significantly different with regard to the mean number of foreign medical graduates (7, 1, and 5, respectively [$p = .003$]) and the mean number who were members of racial or ethnic minorities (2, 2, and 7, respectively [$p = .007$]).

Discriminant function analyses showed that the following variables were significant in discriminating among the three specialties: percentage of salaries paid by grants funds; percentage of life cycle issues taught; and percentages of training done by psychiatrists, nurses, and psychiatry residents. Data on these five var-

iables alone were sufficient to predict correctly the specialty of 84 percent of the programs.

Discussion

The present study demonstrated that important differences exist among the three specialties in teaching mental health issues to residents. The response rate of each specialty to the questionnaire, which was significantly lower for traditional internal medicine than the others, may reflect the interest each discipline has in mental health issues. Very few traditional internal medicine programs used block rotations in psychiatry or mental health, and relatively little formal instruction was given in mental health in traditional internal medicine residencies.

Of note is the heavy emphasis in traditional internal medicine programs on teaching by consultation in inpatient facilities. Since such consultation is an approach that relies on the case at hand, a proper distribution of training cases is not assured. Furthermore, use of the consultant to provide most of the care does not ensure that interviewing, diagnosis, and management are taught to the resident.

On average, a resident in traditional internal medicine requested three consultations with a psychiatrist per year and spent an average of less than 15 minutes with the consultant on each case. In sum, the consultation experience is largely shaped by the motivation of the traditional internal medicine resident to request it and thus leaves much room for variability in the residents' learning. Often the only learning is that which the resident gains from reading the consultation notes, which can be highly variable in quality.

Traditional internal medicine training in mental health was strongly affiliated with departments of psychiatry, which not only paid for a substantial amount of the training but also coordinated and administered the teaching. Primary care internal medicine programs were similar to traditional internal medicine programs in that they were less likely to fund their own mental health teachers, whereas family practice programs provided the bulk of the salary support for these teachers.

With regard to content and skills taught, mental health teachers in traditional internal medicine were much more likely than the others to emphasize organic brain syndrome, substance abuse, and psychophysiologic reactions. By contrast, teachers in family practice emphasized life cycle issues such as grief reactions, marital problems, and occupational stress. Primary care internal medicine occupied an intermediate position on this issue. Traditional internal medicine programs placed less emphasis than the others on teaching psychosocial awareness, interviewing (especially with regard to family and family systems), and complex psychosocial management techniques but gave a prominent place to simple pharmacotherapy. However, since the total hours used for all teaching varied among specialties, the percentage of that teaching

time devoted to mental health must be translated into total hours in order to know the amount of mental health training provided to a resident. For example, family practice and primary care internal medicine programs, on average, provided five times more time in formal training in mental health than traditional internal medicine.

Finally, whereas almost all of primary care internal medicine and family practice programs made some attempt to evaluate the effects of their mental health training programs, a majority of the traditional internal medicine programs reported no specific evaluation component and tended to use informal assessments. This lack of evaluation was consistent with the lack of formal teaching and specific educational goals and objectives in those programs.

Psychiatrists were used to teach less than 20 percent and 40 percent of the mental health knowledge and skills in family practice and primary care internal medicine, respectively. A combination of psychologists, social workers, and primary care physicians provided a majority of mental health training in these two types of residencies. The authors consider that in some residency programs psychosocially oriented attitudes, knowledge, and skills have become familiar enough to the primary care faculty members that they may be able to teach the material pertaining to mental health. However, this assimilation of knowledge by primary care physicians and its effect on the teaching of mental health has not been sufficiently studied or described in the literature.

The finding that programs in family practice and primary care internal medicine use psychiatrists much less often than the traditional internal medicine programs may account for the finding that the former specialties place less em-

phasis than traditional internal medicine on organic mental syndrome and depression and more on sociocultural and life cycle issues and on awareness of psychosocial issues. Since delirium and depressive and anxiety disorders are among the common psychiatric dysfunctions encountered in the primary care setting and often require somatic as well as psychological interventions, the role of the psychiatrist as teacher in primary care residencies should be reconsidered (13).

Although mental health programs taught by members of a variety of disciplines are commonplace in the undergraduate years, the nature of mental health training for primary care residents and the disciplines of the teachers are even more varied than the undergraduate programs. For the past several years, the National Institute of Mental Health has funded training programs to teach mental health skills and knowledge to primary care residents. In addition, the HRSA, which has sponsored training programs in family medicine since 1975, not only requires a mental health training component but also provides funds for behavioral science faculty members, program coordinators, and/or evaluators. The HRSA has encouraged the programs to use educational methods such as stated teaching goals and evaluation tools.

The role of the psychiatrist as teacher in the traditional internal medicine program and the more recently developed specialties of primary care internal medicine and family practice has not been defined. In fact, Engel (14) questioned the role of the psychiatrist as teacher for the typical medical-surgical specialist and felt that the specialists themselves, after advanced psychological training, were the most appropriate teachers of psychosocial issues.

The present study indicates the need for specialists from several different dis-

ciplines to teach mental health topics to primary care residents. Because residency program directors deem it important that trainees gain broad knowledge and skills in mental health, curricula and teaching programs need to be developed that are taught by specialists from a variety of disciplines. Prospective studies that examine the knowledge and skills that trainees accrue from different approaches to teaching mental health issues would assist directors of primary care training programs in assessing the value of the psychiatrist as teacher and in ascertaining which disciplines demonstrate the expertise to teach specific mental health content.

References

1. CARTER, R. (Chairman). *Report to the President from the President's Commission on Mental Health/Volume I*. Washington, D.C.: Government Printing Office, 1978.
2. REGIER, D. A., GOLDBERG, I. D., and TAUBE, C. A. De Facto U.S. Mental Health Services System. *Arch. Gen. Psychiatry*, **35**:685-693, 1978.
3. REGIER, D. A., et al. The NIMH Epidemiological Catchment Area (ECA) Program: Historical Context, Major Objectives, and Study Population Characteristics. *Arch. Gen. Psychiatry*, **41**:934-941, 1984.
4. HOEPER, E. U., et al. Estimated Prevalence of RDC Mental Disorder in Primary Medical Care. *Int. J. Mental Health*, **8**:6-15, Summer 1979.
5. BALTER, M. B. An Analysis of Psychotherapeutic Drug Consumption in the United States. In *Proceedings of the Anglo-American Conference on Drug Abuse/Volume I/Etiology of Drug Abuse*. R. A. Bowen, (Ed.) London: London Royal Society of Medicine, 1973, Pp. 58-65.
6. GOLDBERG, D. Mental Health Priorities in a Primary Care Setting. *Ann. N.Y. Acad. Sci.*, **310**:65-68, 1978.
7. TANTOR, Z., and NIELSON, A. C. The Extent of the Problem: A Review of the Data Concerning the Declining Choice of Psychiatric Careers. *J. Psychiatr. Educ.*, **5**:63-87, Spring 1981.

8. *Summary Report of the Graduate Medical Education National Advisory Committee* (DHHS Publication No. HRA 81-651). Washington, D.C.: U. S. Department of Health and Human Services, 1980.
9. LIPOWSKI, Z. J. Review of Consultation Psychiatry and Psychosomatic Medicine I. *Psychosom. Med.*, **29**:153-171, March-April 1967.
10. *Research on Stress and Human Health: Report of a Study*. Washington, D.C.: National Academy Press, 1981.
11. MUMFORD, E., SCHLESINGER, H. J., and GLASS, G. V. The Effects of Psychological Intervention on Recovery from Surgery and Heart Attack: An Analysis of the Data. *Am. J. Public Health*, **72**:141-151, 1982.
12. WILDER, R. Clinical Competence in Internal Medicine. *Ann. Intern. Med.*, **90**:402-411, 1979.
13. STRAIN, J. J., and HAMMERMAN, D. Ombudsmen (Medical-Psychiatric) Rounds/An Approach to Meeting Patient-Staff Needs. *Ann. Intern. Med.*, **88**:550-555, 1978.
14. ENGEL, G. L. The Biopsychosocial Model and Medical Education/Who Are to Be the Teachers? *N. Engl. J. Med.*, **306**:802-805, 1982.